[Received by the International Bureau on 13 September 2004 (13.09.2004); original claims 1-11 replaced by amended claims 1-11 (2 pages)]

1. A piston incorporating spring means acting, in use, between the piston and an associated connecting rod so as to bias the connecting rod away from the crown of the piston, wherein the spring means is constituted by a pair of disc springs whose circumferential edge portions are supported and separated by a substantially annular support member, the spring means being located substantially in the region of the piston crown and extending over substantially the entire transverse cross-section of the piston, the spring means being such as to permit the crown of the piston to move axially relative to the connecting rod, wherein the support member is constituted by respective rings fixed to the circumferential edge portions of the disc springs, and by an annular band formed with curved support surfaces for rolling engagement with the rings.

2. A piston as claimed in claim 1, wherein the rings and the annular band are made of hardened steel.

3. A piston as claimed in claim 1 or claim 2, wherein the annular band is formed with oil lubrication holes

4. A piston as claimed in any one of claims 1 to 3, wherein the spring is made of titanium 10-2-3.

5. A piston as claimed in any one of claims 1 to 4, further comprising a carrier positioned within the piston, the carrier being slidably mounted within the piston for axial movement relative thereto, and being connected to the connecting rod in such a manner that the spring means permits the crown of the piston to move axially relative to the carrier.

6. A piston as claimed in claim 5, wherein the carrier is provided with a domed surface which is engageable with the disc spring remote from the piston crown, and the piston crown is provided with a domed surface which is engageable with the disc spring adjacent to the piston crown.

7. A piston as claimed in claim 6, wherein the domed surfaces are mirror images of one another.

8. A piston as claimed in any one of claims 4 to 7, wherein the carrier is made of aluminium.

9. A piston as claimed in any one of claims 4 to 8, wherein the carrier is slidably mounted within a sleeve fixed to the inside of the cylindrical wall of the piston at that end thereof remote from the crown.

10. A piston as claimed in claim 9, wherein the sleeve is made of a bronze/aluminium alloy.

11. A piston incorporating spring means acting, in use, between the piston and an associated connecting rod so as to bias the connecting rod away from the crown of the piston, wherein the spring means is constituted by a pair of disc springs whose circumferential edge portions are supported and separated by a substantially annular support member, the spring means being located substantially in the region of the piston crown and extending over substantially the entire transverse cross-section of the piston, the spring means being such as to permit the crown of the piston to move axially relative to the connecting rod, wherein the piston is provided with a domed surface which is engageable with the disc spring remote from the piston crown, and the piston crown is provided with a domed surface which is engageable with the disc spring adjacent to the piston crown.